

Growth and Management of the Third World Megalopolis

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1. Trend of Urbanization in the Third World Countries

The post World War population explosion and rapid rural to urban migration in the densely populated Third World has created an alarming management problem throughout the Third World Cities.

The urban population of the developing world was 286 million in 1950 and quadrupled to 1.14 billion in 1985. It is estimated that by the year 2000, 75 percent of Latin America's population, 42 percent of Africa's and 37 percent of Asia's will live in urban areas.

With the 21st century less than a decade away, the growth and management of the newly emerged big cities has become one of the central concerns of governments and citizens in the Third World countries. At the turn of the 20th century, there were only 11 metropolises with more than one million inhabitants, most of them located in advanced countries. By the end of this century, we expect 400 cities in the world with populations of over one million, among them, there will be 20 mega - cities with populations well exceeding 10 million. Furthermore, over three fourths of those big cities will be located in the Third World.

It is commonly observed from historical data that urbanization normally enters into rapid growth when the level of urbanized population exceeds 30 percent of the total population. This implies further rapid urbanization in the developing countries in the next few decades toward the first half of the 21st century.

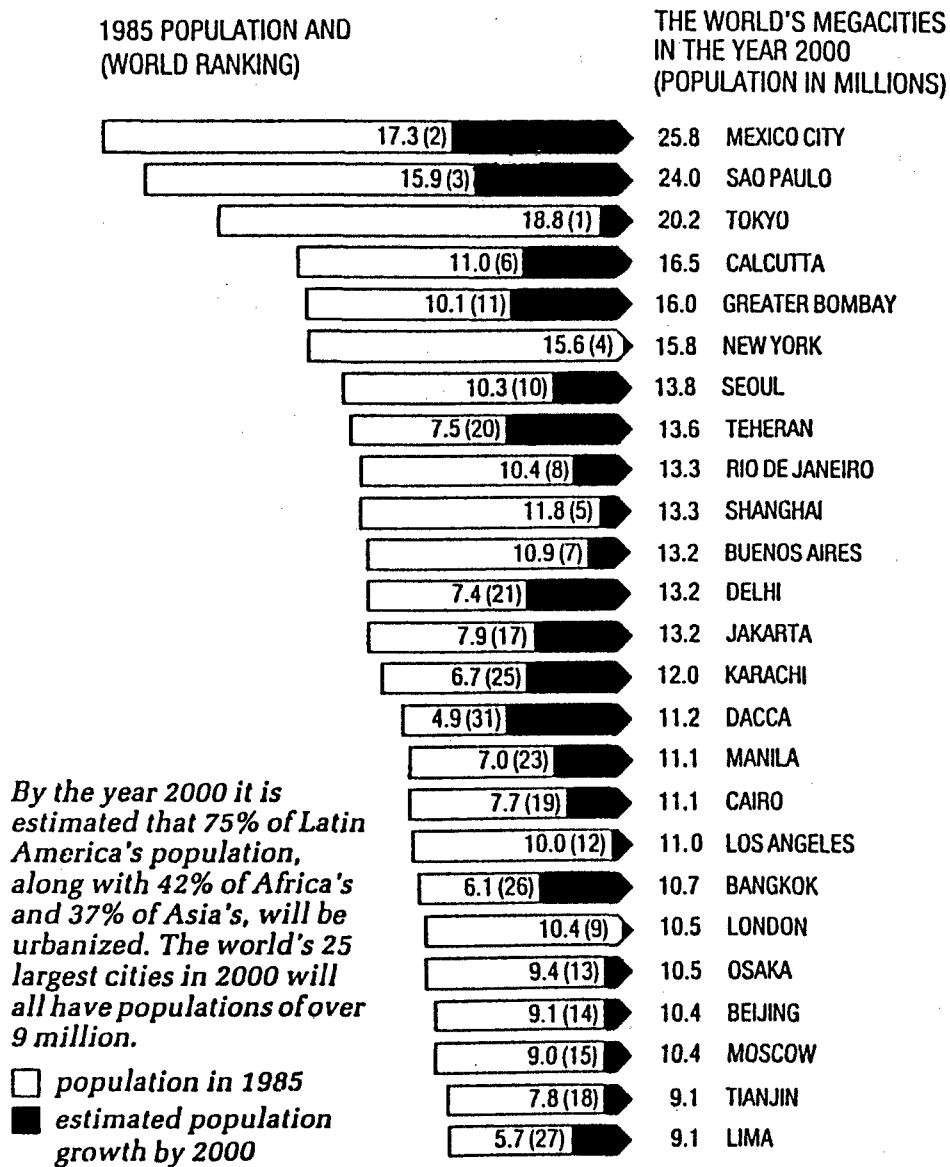
However, mega - cities in developing countries are aggravated by the pressures of mounting population and cumulative economic activities. The need for services and infrastructure to

Table 1

**World's 35 Largest Metropolises Ranked by Population Size (in millions),
1950 — 2000**

Rank	Metropolis	1950 Size	Metropolis	1985 Size	Metropolis	2000 Size
1	New York/Northeastern NJ, USA	12.4	Mexico City, Mexico	18.1	Mexico City, Mexico	26.3
2	London, United Kingdom	10.4	Tokyo/Yokohama, Japan	17.2	Sao Paulo, Brazil	24.0
3	Shanghai China	10.3	Sao Paulo, Brazil	15.9	Tokyo/Yokohama, Japan	17.1
4	Rhein — Ruhr, Federal Republic of Germany	6.9	New York/Northeastern NJ, USA	15.3	Calcutta, India	16.6
5	Tokyo/Yokohama, Japan	6.7	Shanghai, China	11.8	Greater Bombay, India	16.0
6	Beijing (Peking), China	6.7	Calcutta, India	11.0	New York/Northeastern NJ, USA	15.5
7	Paris, France	5.5	Greater Buenos Aires, Argentina	10.9	Seoul, Republic of Korea	13.5
8	Tianjin, China	5.4	Rio de Janeiro, Brazil	10.4	Shanghai, China	13.5
9	Greater Buenos Aires, Argentina	5.3	Seoul, Republic of Korea	10.2	Rio de Janeiro, Brazil	13.3
10	Chicago/Northwestern IN, USA	5.0	Greater Bombay, India	10.1	Delhi, India	13.3
11	Moscow, USSR	4.8	Los Angeles/Long Beach, CA, USA	10.0	Greater Buenos Aires, Argentina	13.2
12	Calcutta, India	4.4	London, United Kingdom	9.8	Cairo/Giza/Imbaba, Egypt	13.2
13	Los Angeles/Long Beach, CA, USA	4.1	Beijing (Peking), China	9.2	Jakarta, Indonesia	12.8
14	Osaka/Kobe, Japan	3.8	Rhein — Ruhr, Federal Republic of Germany	9.2	Baghdad, Iraq	12.8
15	Milan, Italy	3.6	Paris, France	8.9	Teheran, Iran	12.7
16	Rio de Janeiro, Brazil	3.5	Moscow, USSR	8.7	Karachi, Pakistan	12.2
17	Mexico City, Mexico	3.1	Cairo/Giza/Imbaba, Egypt	8.5	Istanbul, Turkey	11.9
18	Philadelphia/Western NJ, USA	3.0	Osaka/Kobe, Japan	8.0	Los Angeles/Long Beach, CA, USA	11.2
19	Greater Bombay, India	2.9	Jakarta, Indonesia	7.9	Dacca, Bangladesh	11.2
20	Detroit, MI, USA	2.8	Tianjin, China	7.8	Manila, Philippines	11.1
21	Sao Paulo, Brazil	2.8	Delhi, India	7.4	Beijing (Peking), China	10.8
22	Naples, Italy	2.8	Baghdad, Iraq	7.2	Moscow, USSR	10.1
23	Leningrad, USSR	2.6	Teheran, Iran	7.2	Bangkok/Thonburi, Thailand	9.5
24	Manchester, United Kingdom	2.5	Manila, Philippines	7.0	Tianjin, China	9.2
25	Birmingham, United Kingdom	2.5	Milan, Italy	7.0	Paris, France	9.2
26	Cairo/Giza/Imbaba, Egypt	2.5	Chicago/Northwestern IN, USA	6.8	Lima/Callo, Peru	9.1
27	Boston, MA, USA	2.3	Istanbul, Turkey	6.8	London, United Kingdom	9.1
28	Shenyang (Mukden), China	2.2	Karachi, Pakistan	6.8	Kinshasa, Zaire	8.9
29	West Berlin, Federal Republic of Germany	2.2	Lima/Callo, Peru	5.7	Rhein — Ruhr, Federal Republic of Germany	8.6
30	San Francisco/Oakland, CA, USA	2.0	Bangkok/Thonburi, Thailand	5.5	Lagos, Nigeria	8.3
31	Leeds — Bradford, United Kingdom	1.9	Madras, India	5.2	Madras, India	8.2
32	Glasgow, United Kingdom	1.9	HongKong, HongKong	5.1	Bangalore, India	8.0
33	Jakarta, Indonesia	1.8	Madrid, Spain	5.1	Osaka/Kobe, Japan	7.7
34	Hamburg, Federal Republic of Germany	1.8	Leningrad, USSR	5.1	Milan, Italy	7.5
35	Vienna, Austria	1.8	Dacca, Bangladesh	4.9	Chicago/Northwestern IN, USA	7.2

SOURCE : United Nations (1985 : Table A — 12).



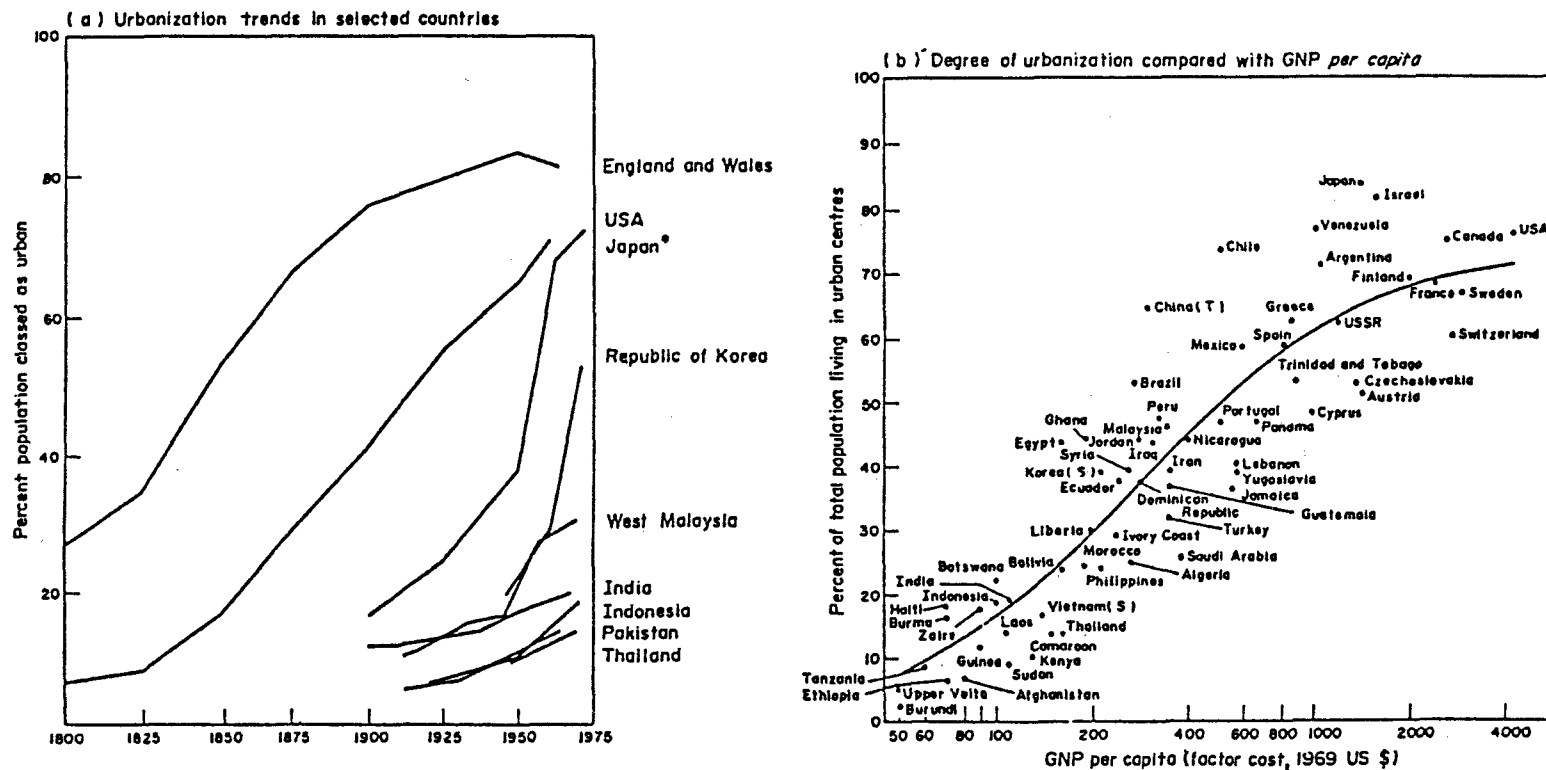


Fig.1. Urbanization trends and cross — sectoral GNP per capita.

Source : Fu — chen Lo and Kamal Salih (ed)

Growth Pole Strategy and Regional Development Policy 1978

accommodate these growing mega – cities far exceeds the financial means and capabilities of their urban administrations, often resulting in chaotic situations. The lack of basic urban services has contributed to inadequate housing for low – income residents, unemployment among the urban poor, traffic congestion, irregular land – use patterns, and environmental deterioration.

2. Urban Dualism in the Third World cities

The structure of the large cities in the Third World is characteristically different from that of the metropolitan centers of developed countries in that the Third World cities are typified by a dualistic structure consisting of modern industries and co – operation with the traditional economy. This dualism has been described in terms of a formal/informal sector dichotomy.

The formal sector is dominated by domestically and foreign financed modern industries and business of the corporate type with institutionally set high incomes and wages, and maintaining a relatively high standard of living. Since the labour absorptive capacity of the formal sectors is rather limited, a fairly large portion of urban population in the Third World countries tends to be absorbed into the urban informal sector consisting of a wide range of traditional activities such as hawkers, vendors, daily labourers and services which are distinct from professional and white collar occupations. A large percentage of those in the informal sector population live in the growing slum and squatter settlements in big cities in the Third World. Due to increasing rural – urban disparities and limited labour absorption capacity of the formal sector, the momentum of rural to metropolitan migration is enlarging with increasing newly urbanized population settled in the slums and squatter settlement each year. It is estimated that from 25 percent to as high as 65 percent of household are the slum/squatter households in the Third World metropolises.

Between the formal sector and the informal sector, there is not only income disparity, but a sharp contrast in living styles and different needs for urban amenities in housing, transportation and other urban infrastructures.

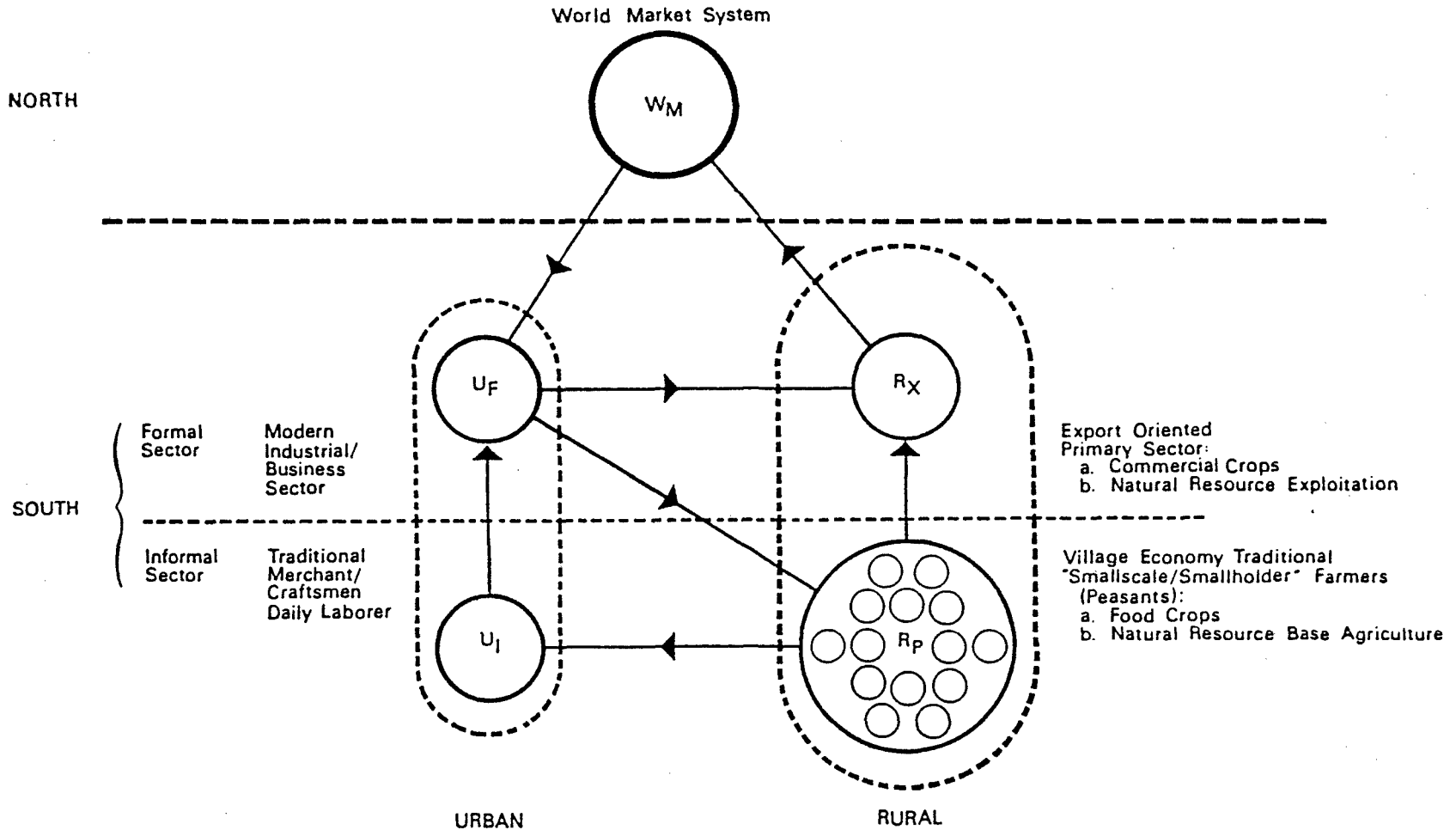


FIGURE 2 — 6
BASIC MACRO — SPATIAL MODEL

Source : Fu — chen Lo (ed)

Rural — Urban Relations and Regional Development 1981

Table 2

Incidence of Slums and Squatter Areas in Selected Cities

region and country	City	Slums and squatter settlements as percentage of city population	Year	region and country	City	Slums and squatter settlements as percentage of city population	Year
Sub-Saharan Africa				Middle-income Asia			
Cameroon	Douala	80	1970	Hong Kong	Hong Kong	16	1969
	Yaounde	90	1970	Korea	Seoul	30	1970
Ethiopia	Addis Ababa	90	1968		Busan	31	1970
Ghana	Accra	53	1968	Malaysia	Kuala Lumpur	37	1971
Ivory Coast	Abidjan	60	1964	Philippines	Manila	35	1972
Kenya	Nairobi	33	1970	Singapore	Singapore	15	1970
	Mombasa	66	1970	Latin America and the Caribbean			
Liberia	Monrovia	50	1970	Brazil	Rio de Janeiro	30	1970
Madagascar	Tananarive	33	1969		Belo Horizonte	14	1970
Malawi	Blantyre	56	1966		Recife	50	1970
Nigeria	Ibadan	75	1971		Porto Alegre	13	1970
Senegal	Dakar	60	1971	Chile	Brasilia	41	1970
Somalia	Mogadishu	77	1967		Santiago	25	1964
Sudan	Port Sudan	55	1971	Colombia	Bogota	60	1969
Tanzania	Dar es Salaam	50	1970		Cali	30	1969
Togo	Lome	75	1970	Ecuador	Buenaventura	80	1969
Upper Volta	Ouagadougou	70	1966		Guayaquil	49	1969
Zaire	Kinshasa	60	1969	Guatemala	Guatemala City	30	1971
Zambia	Lusaka	48	1969	Honduras	Tegucigalpa	25	1970
North Africa and Middle East				Mexico	Mexico City	46	1970
Iraq	Baghdad	29	1965	Panama	Panama City	17	1970
	Amman	14	1971	Peru	Lima	40	1970
Lebanon	Beirut	1.5	1970		Arequipa	40	1970
Morocco	Casablanca	70	1971	Venezuela	Chimbote	67	1970
	Rabat	60	1971		Caracas	40	1969
Turkey	Ankara	60	1970		Maracaibo	50	1969
	Istanbul	40	1970		Barquisimeto	41	1969
	Izmir	65	1970		Ciudad Guayana	40	1969
Low-income Asia							
Afghanistan	Kabul	21	1971	Note: Definitions of "slums" and "squatter areas" vary from region to region and from city to city; therefore, these data only present the roughest of impressions of the housing problem in these cities.			
India	Calcutta	33	1971	Source: Grimes (1976).			
	Bombay	25	1971				
	Delhi	30	1971				
	Madras	25	1971				
	Baroda	19	1971				
Indonesia	Jakarta	26	1972				
	Bandung	27	1972				
	Makassar	33	1972				
Nepal	Katmandu	22	1961				
Pakistan	Karachi	23	1970				
Sri Lanka	Colombo	43	1968				

3. The World city System and World Economy

The population explosion and massive rural to urban migration in the developing countries during the post – world war period is one of the key determinants of the rapid growth of the Third World megalopolises. In addition, policies and measures to promote economic development and industrialization in the developing countries have been transforming predominantly agricultural and rural societies to a more industrialized and urbanized societies in a relatively short period. The growth and structural transformation of megalopolises is an integral part and process of national development. Furthermore, global economic integration, increased international trade, capital flows, telecommunication, new waves of technologies, and shifts in the comparative advantage of production, continue to play a central role in integrating the national territories and the shaping up the spatial organization of the country economies at the world level. At the center of this global economic integration and structural adjustments is the inter – linkage of mega – cities and other major metropolises which form a world – city system.

The rise and fall of OPEC cities, the debt burden of Latin America metropolis; the collapse of commodity prices and stagnation of importsubstitution industries in African urban centers, and rising role of Tokyo and other Asian cities as new dominant trade and financial centers in East Asian and the world economy, clearly demonstrate how the major metropolitan centers in the world have been affected by the current global economic adjustments occurring over the recent past. The new wave of techno – economic paradigm are in the process of replacing the old production paradigm and reshaping the major metropolitan centers both in developed and developing countries in the decades to come.

Lewis Mumford wrote in 1961 that “Megalopolis is fast becoming a universal form, and the dominant economy is a metropolitan economy, in which no effective enterprise is possible without a close tie to a big city”.

Whether it should be called a megalopolis, a mega – city, or a world city, the role of the dominant cities at the world or the national levels is increasingly associated with its economic capacity and its external linkages as the world economy has increased its interdependency during the post – world war period. During the past decade, the world economy has undergone a series of economic upheavals which have changed the configuration of mega – cities and defined new conditions for its transformation toward the early 21st century.

Global adjustments which took place in the early 1980's continue to transform the world economy into a pattern of uneven growth among the major economic blocs. East and Southeast Asia are leading with the highest growth rates while the U.S., E.C. and the rest of the world remain at a much lower level. The process of uneven growth and regionalization of world economic development is not a short – term phenomenon. It is mid – term to long – term in

scale and structural in nature.

The emerging pattern of the World City System based on the current global adjustment and the national economic performance can be summarized as Table 3. The Latin America and African cities are plagued by the high dependency on primary commodities. These cities face immense difficulty in financing structural adjustment and urban infrastructural expenditure.

The stagnation of the commodity prices has also lead to massive rural to urban migration, escalating the pressures for the expansion of the stock of urban infrasture. Heavy external lending and sluggishness in commodity export earnings is further aggravating financing future urban development. This spiral of stagnation is casting a dark shadow in immediate recovery of cities in these countries.

In the medium growth group lies a whole range of cities from both developed and developing countries. The cities in the United States and Western Europe have been suffering from the trend of deindustrialization in the 70's accompanied by a continuous decline of blue-collar jobs in the traditional industrial centers. It is also evident that the structural change of those metropolis corresponds with the increasing role of the service sector. Lately a new trend of information processing and high-technology industries has begun to serve as the new impulse for the future growth. But this does not necessarily coincide with some of the old metropolises. In Europe, opening of East European cities and incoming of a larger integrated EC market is expected to stimulate the revitalization of European industries with increasing role of high technology. These new trends are likely to induce a structural adjustment in European cities.

Major cities in South Asia and Middle East are traditionally more inward looking thus less effected by the current global adjustments and has maintained moderate growth.

In contrast, the cities with high economic growth rates have been highly concentrated in the East and Southeast Asia. These cities have had phenomenal expansion in their share in world trade and production. The share of Japan's GNP to the world GNP has raised from 4.1 percent in 1960 to a 13 percent level in 1990. Tokyo has quickly emerged as a world financial center as Japan has assumed the role of the largest creditor in the world. Many Asian economies also have experienced a two-digit growth in the recent past. Trade and inter-industrial linkages together with a massive flow of the capital among Japan, Asian NIEs and ASEAN has led to a rapid growth and structural transformation of Asian cities.

A network of Asian cities is expected to form a new growth corridor in the world city system.

Table 3

Grouping of Major World Cities by Regional/National Economic Performance

High – Debt, High Inflation High Primary Export Economies		Medium Growth (2 – 4 %) Economies		High Economic Growth (4 % and over) Economies	
		<u>U.S.A.</u>	New York Los Angeles Chicago San Francisco	<u>Japan</u>	Tokyo/ Yokohama Osaka/Kobe
		<u>W. Europe</u>	London Paris Milan Rome Rhein – Ruhr Berlin Madrid		
		<u>E. Europe</u>	Moscow Leningrad		
<u>Latin America</u>		<u>South Asia</u>	Bombay Calcutta Delhi Madras Karachi Dacca	<u>NIEs</u>	Seoul Taipei Hong kong Singapore
Buenos Aires	ARGENTINA				
Lima	PERU				
Lapaz	BOLIVIA				
Santiago	CHILE				
Caracas	VENEZUELA				
Bogota	COLOMBIA				
Mexico City	MEXICO				
Sao Paulo	BRAZIL	<u>Middle East</u>	Istanbul Teheran Baghdad	<u>ASEAN</u>	Jakarta Bankok Kualalumpur
Rio de Janeiro	BRAZIL				
<u>Africa</u>		<u>ASEAN</u>	Manila	<u>China</u>	Beijing Tianjin Shanghai Guangzhou
Lagos	NIGERIA				
Kinshasa	ZAIRE				
Cairo	EGYPT				
Nairobi	KENYA				
Accra	GHANA				
Abidjah	IVORY COAST				
Algiers	ALGERIA				

4. Environment and Third World Urban Management

In Third World cities, the need for infrastructural services to accommodate the rapidly growing urban population far exceeds the financial means and capabilities of their government, resulting in chaotic urban management. This has created inadequacy in basic services for a livable urban environment, including poor housing, traffic congestion, irregular land – use patterns and general environmental deterioration.

For instance, one of the mega – cities in the Third World known for its beauty is the city of Rio de Janeiro, however it is also known for its squatter settlements and slums. Authorities estimate that of Rio's 502 shanty – towns housing over 3 million people, two – thirds of these are perched on steep slopes in hillsides surrounding Rio. Thousands of tin and cardboard shacks have been put up by squatters. As more poor people build "temporary" shelters, they strip away the vegetation on the steep hills – vegetation that anchors the soil and protects the watershed. The bare soil exposes itself to the tropical storms and mud slides. In February 1988, mud slides claimed the lives of 277 and leaving over 20,000 homeless. Although many of Rio's middle class and wealthy neighborhood were flooded, destitution and human suffering was greatest in this squatter settlements and shanty – towns that cover the hills.

Those problems and other chaotic urban management issues are commonly shared and experienced by most of the big cities across the Third World. Furthermore, with up – coming rapid urbanization and polarization of new rural to urban migrants in the cities, the problems will be further aggravated.

Under the government policies to promote modernization and industrialization the modern sector is always given priority in infrastructural improvement. However, the majority of the people are still in the economically weaker traditional informal sector which is often left behind in the provision of even the basic minimum services. The disparity between those two sectors is widening. The urgent issue is how to strike a better balance between economic efficiency and social equity.

One common objective often adopted by those in charge of designing urban policies in developing countries is the goal to make cities serve more effectively the preferences of the formal sector (the better – off sections).

As such it may tend to view the growth of slums as an infringement on the beauty of the city ; to regard street vendors, and overcrowded buses as a nuisance impeding the mobility of private automobiles. The policy prescriptions that may follow from this diagnosis of the urban problem is the adoption of public measures on : the beautification of cities through slum removal ; construction of high cost public housing ; the banning of street vendors from commercial districts, etc. An alternative set of objectives call for an increase in the overall

efficiency for the majority and for the alleviation of the poverty affecting substantial portions of the population in the cities of the developing world. At the sametime, the emphasis of public involvement in supplying transport, housing, and services world have to shift to areas such as low – cost urban infrastructure and basic education and health programmes in which private supply responses are least able to meet the increases in demands associated with rapid urban growth.

Basic needs for the urban poor to maintain a decent life in the city is to be consider as their entitlement as an urban resident. Prioritization of those basic urban amenities is one of most urgent policy issues in the Third World cities. Excess to affordable quality of life by marginal urban residents must be taken into account in city management policies. The perceived deprivation to social and economic opportunities sow the seeds for delinquent behaviour as well as fosters illicit social and economic activities. As a matter of urgency, sustaining peace and order requires addressing the basic needs of the urban poor.

5. Sustainability of Urban Environment

Many Third World mega – cities are facing bottlenecks in the provision of basic amenities and in their carrying capacities of the urban environment. Based on a “global average”, it has been calculated that a city of 1 million inhabitants consume every day about 625,000 metric tons of water, 2,000 metric tons of food, and 9,500 metric tons of fuel, while at the same time generating 500,000 metric tons of waste water, 2,000 metric tons of solid wastes and 950 metric tons of air pollutants. However for many Third World mega – cities the continuous deterioration of urban environment and trends of rapid migration are pushing its sustainability to its limits. Mexico city for instance with 3 million automobile plus 7,000 public buses and 130,000 factories (which is half of the entire of Mexico) concentrated in this most crowded mege – city, generated 110,000 tons of air pollutant a day where the air was recently declared unfit to breathe. It was estimated that as high as 100,000 people died of pollution including 30,000 children. In calcutta, over 12 million population in sharing all urban public infrastructure which is capable to support 2 million population. 1.5 million live in the street without shelter. In many low – income countries as high as 70 percent of the urban population is a one room family, and an average of only 5 percent of solid waste is properly treated. According to WHO, over 1.2 billion people lack safe drinking water. This leads to 1 billion casses of diarrhoea and the death of 4.6 million children per year.

Improvements in the urban environment and its sustainability are the most urgent priority beyond the beautification of the third world cities, and it requires both financial and technical assistance from advaced countries.

6. Population Distribution Policy and Urban Management

Rapid rural to urban migration is not only the result of the pull factor due to the income

disparity between the countryside and the big cities but also is a consequence of the push factor attributed to the deterioration of population pressure on the limited arable land. For the same reason rural poverty has led to opening of forest and marginal land for survival which has created further encroachment of "green areas" in the Third world. Tropical forests are shrinking by 11 million hectares a year due to commercial logging and the enlargement of poverty enclaves.

Therefore it requires a close examination of the population distribution policy and its impact on the environment. In coping with polarized urban population and rapid growth of the mega-cities, growth pole approach or policy of concentrated decentralization has been adopted by many governments. This effort to create counter-magnetized centers to decentralize population has had mixed results. The role of small and medium cities has been recognized as vital to overcome rural stagnation and in providing urban accommodation at a lower cost. Restructuring of the city system to cope with better population distribution has a role in coping with the deterioration of the mega-city environment and rural poverty. The environmental issue in the Third World especially in its cities can not be separated from the overall concern of population explosion and poverty.

Today mega-cities around the world are in transition and would face new and complex challenges in the decades to come. Its gigantic size in terms of its number of population and cumulative economic, social and cultural activities would continue to shape-up mega-cities as vital centers of civilization for mankind. The dynamism of its size can invigorate the old socio-economic structures to innovate new approaches to city management and the creation of new forms of vitality in the mega-cities. At the same time the complexities of its size impose difficult policy choices in addressing the needs of its different constituents. A number of mega-cities are facing bottlenecks in the provision of basic amenities. Their carrying capacities of urban environment primarily as a result of rapid migration into the city is pushing its sustainability to its limits.

Hence the policy choice is to balance the trade-off between short term strategy and long term goals. The need to resolve some of the crises of sustaining its gigantic population in mega-cities must be addressed. This must be done in the perspective of long term policies that attempt to create mega-cities as new centers of civilization. Short term policy measures must be directed at establishing the minimum threshold of maintaining affordable quality of life within the available means and resources in these cities. At the same time the long term measures should provide the window of opportunity to create the continued sustainability of its existence in the 21st century.

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